

Appln. No. 09/882,098  
Amendment dated December 15, 2004  
Reply to Office Action mailed September 15, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims (deleted text being struck through and added text being underlined):

1           1. (Original) In a network comprising a plurality of computing  
2 devices, each computing device having a memory and being capable of  
3 accessing the Internet, and at least one of the computing devices being  
4 capable of connecting to the Internet, each computing device capable  
5 of connecting to the Internet having a connection priority, a method  
6 for assigning an Internet gateway for the network, comprising the  
7 steps of:

8           broadcasting to the network a request to become the gateway  
9 from one of the computing devices capable of connecting to the  
10 Internet, wherein the request to become the gateway includes the  
11 connection priority of the computing device broadcasting the request;  
12 and

13           assigning the computing device broadcasting the request as the  
14 gateway for the network if the computing device broadcasting the  
15 request does not receive a response from the other computing devices  
16 within a predetermined time period.

1           2. (Original) The method of claim 1, wherein the predetermined  
2 time period is approximately 1 to 5 seconds.

1           3. (Original) The method of claim 1, wherein each computing  
2 device is assigned a unique Internet protocol (IP) address, further  
3 comprising the steps of:

4           broadcasting to the network the IP address of the computing  
5 device assigned as the gateway for the network; and

6           storing in the memory of each computing device the IP address

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7 broadcasted to the network as the IP address of the gateway for the  
8 network.

1 4. (Original) The method of claim 1, wherein the computing  
2 device assigned as the gateway for the network is assigned a unique  
3 client IP address and assumes a predetermined gateway IP address.

1 5. (Original) The method of claim 1, wherein one of the  
2 computing devices is capable of operating as a proxy for the Internet  
3 gateway and is capable of being assigned a unique client IP address  
4 and a proxy IP address, and further wherein at least one of the other  
5 computing devices is capable of accessing the Internet by performing  
6 the steps of:

7 transmitting from the respective computing device to the proxy  
8 IP address of the proxy a message to be sent to the Internet; and

9 transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

1 6. (Original) The method of claim 1, wherein at least one of the  
2 other computing devices capable of connecting to the Internet  
3 responds to the broadcasted request to become the gateway by  
4 performing the step of:

5 determining whether the connection priority of the respective  
6 computing device is higher than the connection priority included in  
7 the broadcasted request to become the gateway;

8 if the connection priority of the respective computing device is  
9 not higher than the connection priority included in the broadcasted  
10 request, sending no response to the broadcasted request; and

11 if the connection priority of the respective computing device is  
12 higher than the connection priority included in the broadcast request,

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13 performing the steps of:

14           broadcasting to the network a request to become the  
15 gateway from the respective computing device within the  
16 predetermined time period, wherein the request to become the  
17 gateway includes the connection priority of the respective  
18 computing device; and  
19           assigning the respective computing device as the gateway  
20 for the network if the respective computing device receives no  
21 response from the other computing devices within the  
22 predetermined time period.

1           7. (Original) The method of claim 6, wherein the predetermined  
2 time period is approximately 1 to 5 seconds.

1           8. (Original) The method of claim 6, wherein each computing  
2 device is assigned a unique Internet protocol (IP) address, further  
3 comprising the step of:

4           broadcasting to the network the IP address of the computing  
5 device assigned as the gateway for the network; and

6           storing in the memory of each computing device the IP address  
7 broadcasted to the network as the IP address of the gateway for the  
8 network.

1           9. (Original) The method of claim 6, wherein the computing  
2 device assigned as the gateway for the network is assigned a unique  
3 client IP address and assumes a predetermined gateway IP address.

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1           10. (Original) The method of claim 6, wherein one of the  
2 computing devices is capable of operating as a proxy for the Internet  
3 gateway and is capable of being assigned a unique client IP address  
4 and a proxy IP address, further wherein at least one of the other  
5 computing devices is capable of accessing the Internet by performing  
6 the steps of:  
7           transmitting from the respective computing device to the proxy a  
8 IP address of the proxy a message to be sent to the Internet; and  
9           transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

1           11. (Original) A storage medium readable by a computing device  
2 and having instructions encoded thereon for causing the computing  
3 device to perform, in a network comprising a plurality of computing  
4 devices, each computing device having a memory and being capable of  
5 accessing the Internet, and at least one of the computing devices being  
6 capable of connecting to the Internet, each computing device capable  
7 of connecting to the Internet having a connection priority, a method  
8 for assigning an Internet gateway for the network, the method  
9 comprising the steps of:  
10           broadcasting to the network a request to become the gateway  
11 from one of the computing devices capable of connecting to the  
12 Internet, wherein the request to become the gateway includes the  
13 connection priority of the computing device broadcasting the request;  
14 and  
15           assigning the computing device broadcasting the request as the  
16 gateway for the network if the computing device broadcasting the  
17 request does not receive a response from the other computing devices  
18 within a predetermined time period.

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1           12. (Original) The storage medium of claim 11, wherein each  
2 computing device is assigned a unique Internet protocol (IP) address,  
3 and further wherein the method further comprises the steps of:  
4           broadcasting to the network the IP address of the computing  
5 device assigned as the gateway for the network; and  
6           storing in the memory of each computing device the IP address  
7 broadcasted to the network as the IP address of the gateway for the  
8 network.

1           13. (Original) The storage medium of claim 11, wherein the  
2 computing device assigned as the gateway for the network is assigned  
3 a unique client IP address and assumes a predetermined gateway IP  
4 address.

1           14. (Original) The storage medium of claim 11, wherein one of  
2 the computing devices is capable of operating as a proxy for the  
3 Internet gateway and is capable of being assigned a unique client IP  
4 address and a proxy IP address, and further wherein at least one of the  
5 other computing devices is capable of accessing the Internet by  
6 performing the steps of:  
7           transmitting from the respective computing device to the proxy  
8 IP address of the proxy a message to be sent to the Internet; and  
9           transmitting from the proxy IP address of the computing device  
10 assigned as the gateway for the network the message to be sent to the  
11 Internet.

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1           15. (Original) The storage medium of claim 11, wherein at least  
2 one of the other computing devices capable of connecting to the  
3 Internet responds to the broadcasted request to become the gateway  
4 for the network by performing the steps of:  
5           determining whether the connection priority of the respective  
6 computing device is higher than the connection priority included in  
7 the broadcasted request to become the gateway;  
8           if the connection priority of the respective computing device is  
9 not higher than the connection priority included in the broadcasted  
10 request, sending no response to the broadcasted request; and  
11           if the connection priority of the respective computing device is  
12 higher than the connection priority included in the broadcasted  
13 request, performing the steps of:  
14           broadcasting to the network a request to become the  
15 gateway from the respective computing device within the  
16 predetermined time period, wherein the request to become the  
17 gateway includes the connection priority of the respective  
18 computing device; and  
19           assigning the respective computing device as the gateway  
20 for the network if the respective computing device receives no  
21 response from the other computing devices within the  
22 predetermined time period.

1           16. (Original) In a network comprising a plurality of computing  
2 devices, each computing device having a memory and being capable of  
3 accessing the Internet, and at least one of the computing devices being  
4 capable of connecting to the Internet, each computing device capable  
5 of connecting to the Internet having a connection priority, a method  
6 for assigning an Internet gateway for the network, comprising the  
7 steps of:

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8           broadcasting to the network a request for a new gateway from  
9 one of the computing devices;  
10           in response to the request for new gateway, broadcasting to the  
11 network a request to become the gateway from each computing device  
12 capable of connecting to the Internet, wherein each request to become  
13 the gateway includes the connection priority of the respective  
14 computing device broadcasting the request to become the gateway; and  
15           in response to the request to become the gateway, performing by  
16 each computing device capable of connecting to the Internet steps of:  
17               determining whether the connection priority of the  
18               respective computing device is higher than the connection  
19               priority included in the broadcasted request to become the  
20               gateway; if the connection priority of the respective computing  
21               device is not higher than the connection priority included in the  
22               broadcasted request to become the gateway, sending no response  
23               to the broadcasted request to become the gateway; and if the  
24               connection priority of the respective computing device is higher  
25               than the connection priority included in the broadcasted request  
26               to become the gateway, performing the steps of:  
27                       broadcasting to the network a request to become the  
28                       gateway from the respective computing device within the  
29                       predetermined time period, wherein the request to become  
30                       the gateway includes the connection priority of the  
31                       respective computing device; and  
32                       assigning the respective computing device as the  
33                       new gateway for the network if the respective computing  
34                       device receives no response from the other computing  
35                       devices within the predetermined time period.

1           17. (Original) The method of claim 16, wherein the  
2           predetermined time period is approximately 1 to 5 seconds.

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1           18. (Original) The method of claim 16, wherein each computing  
2 device is assigned a unique Internet protocol (IP) address, further  
3 comprising the steps of:

4           broadcasting to the network the IP address of the computing  
5 device assigned as the new gateway for the network; and  
6           storing in the memory of each computing device the IP address  
7 broadcasted to the network as the IP address of the gateway for the  
8 network.

1           19. (Original) The method of claim 16, wherein the computing  
2 device assigned as the gateway for the network is assigned a unique  
3 client IP address and assumes a predetermined gateway IP address.

1           20. (Original) The method of claim 16, wherein one of the  
2 computing devices is capable of operating as a proxy for the Internet  
3 gateway and is capable of being assigned a unique client IP address  
4 and a proxy IP address, and further wherein at least one of the other  
5 computing devices is capable of accessing the Internet by performing  
6 the steps of:  
7           transmitting from the respective computing device to the proxy  
8 IP address of the proxy a message to be sent to the Internet; and  
9           transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.



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1           21. (Original) A storage medium readable by a computing  
2 device and having instructions encoded thereon for causing the  
3 computing device to perform, in a network comprising a plurality of  
4 computing devices, each computing device having a memory and being  
5 capable of accessing the Internet, and at least one of the computing  
6 devices being capable of connecting to the Internet, each computing  
7 device capable of connecting to the Internet having a connection  
8 priority, a method for assigning an Internet gateway for the network,  
9 the method comprising the steps of:

10           broadcasting to the network a request for a new gateway from  
11 one of the computing devices;

12           in response to the request for the new gateway, broadcasting to  
13 the network a request to become the gateway from each computing  
14 device capable of connecting to the Internet, wherein each request to  
15 become the gateway includes the connection priority of the respective  
16 computing device broadcasting the request to become the gateway; and

17           in response to the request to become the gateway, performing by  
18 each computing device capable of connecting to the Internet the steps  
19 of:

20                   determining whether the connection priority of the  
21 respective computing device is higher than the connection  
22 priority included in the broadcasted request to become the  
23 gateway;

24                   if the connection priority of the respective computing  
25 device is not higher than the connection priority included in the  
26 broadcasted request to become the gateway, sending no response  
27 to the broadcasted request to become the gateway; and

28                   if the connection priority of the respective computing  
29 device is higher than the connection priority included in the  
30 broadcasted request to become the gateway, performing the steps

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31 of:

32 broadcasting to the network a request to become the  
33 gateway from the respective computing device within the  
34 predetermined time period, wherein the request to become  
35 the gateway includes the connection priority of the  
36 respective computing device; and  
37 assigning the respective computing device as the  
38 gateway for the network if the respective computing  
39 device receives no response from the other computing  
40 devices within the predetermined time period.

1 22. (Original) The storage medium of claim 21, wherein each  
2 computing device is assigned a unique Internet protocol (IP) address,  
3 and further wherein the method further comprises the steps of:

4 broadcasting to the network the IP address of the computing  
5 device assigned as the new gateway for the network; and  
6 storing in the memory of each computing device the IP address  
7 broadcasted to the network as the IP address of the gateway for the  
8 network.

1 23. (Original) The storage medium of claim 21, wherein the  
2 computing device assigned as the gateway for the network is assigned  
3 a unique client IP address and assumes a predetermined gateway IP  
4 address.

1 24. (Original) The storage medium of claim 21, wherein one to  
2 the computing devices is capable of operating as a proxy for the  
3 Internet gateway and is capable of being assigned a unique client IP  
4 address and a proxy IP address, and further wherein at least one of the  
5 other computing devices is capable of accessing the Internet by  
6 performing the steps of:

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7 transmitting from the respective computing device to the proxy  
8 IP address of the proxy a message to be sent to the Internet; and  
9 transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

1 25. (Withdrawn) In a network comprising a plurality of  
2 computing devices, each computing device having a memory and being  
3 capable of accessing the Internet, and one or more of the computing  
4 devices being capable of connecting to the Internet, and one of the  
5 computing devices being assigned as a current Internet gateway for  
6 the network, a method for assigning an Internet gateway for the  
7 network, comprising the steps of:

8 detecting a failure to access the Internet through the current  
9 Internet gateway by one of the computing devices;

10 in response to the detected failure, dynamically assigning one of  
11 the computing devices capable of connecting to the Internet as a new  
12 Internet gateway for the network; and

13 automatically reconfiguring each computing device to access the  
14 Internet through the new Internet gateway.

1 26. (Withdrawn) The method of claim 25, wherein each  
2 computing device is assigned a unique Internet protocol (IP) address,  
3 and further wherein the step of automatically reconfiguring each  
4 computing device to access the Internet through the new Internet  
5 gateway further comprises the steps of:

6 broadcasting to the network the IP address of the computing  
7 device assigned as the new Internet gateway for the network; and

8 storing in the memory of each computing device the IP address  
9 broadcasted to the network as the IP address of the Internet gateway  
10 for the network.

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1           27. (Withdrawn) The method of claim 25, wherein the  
2 computing device assigned as the gateway for the network is assigned  
3 a unique client IP address and assumes a predetermined gateway IP  
4 address.

1           28. (Withdrawn) The method of claim 25, wherein one of the  
2 computing devices is capable of operating as a proxy for the Internet  
3 gateway and is capable of being assigned a unique client IP address  
4 and a proxy IP address, and further wherein at least one of the other  
5 computing devices is capable of accessing the Internet by performing  
6 the steps of:  
7           transmitting from the respective computing device to the proxy  
8 IP address of the proxy a message to be sent to the Internet; and  
9           transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

1           29. (Withdrawn) The method of claim 25, wherein the step of  
2 dynamically assigning one of the computing devices capable of  
3 connecting to the Internet as the new Internet gateway for the network  
4 further comprises the steps of:  
5           in response to the detected failure, broadcasting to the network a  
6 request to become the gateway from one of the computing device  
7 capable of connecting to the Internet, wherein the request to become  
8 the gateway includes the connection priority of the computing device  
9 broadcasting the request; and  
10           assigning the computing device broadcasting the request as the  
11 new Internet gateway for the network if the computing device  
12 broadcasting the request does not receive a response from the other  
13 computing devices within a predetermined time period.

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1           30. (Withdrawn) The method of claim 29, wherein the  
2 predetermined time period is approximately 1 to 5 seconds.

1           31. (Withdrawn) The method of claim 29, wherein at least one  
2 of the other computing devices capable of connection to the Internet  
3 responds to the broadcasted request to become the gateway by  
4 performing the steps of:  
5           determining whether the connection priority of the respective  
6 computing device is higher than the connection priority included in  
7 the broadcasted request to become the gateway;  
8           if the connection priority of the respective computing device is  
9 not higher than the connection priority included in the broadcasted  
10 request to become the gateway, sending no response to the  
11 broadcasted request; and  
12           if the connection priority of the respective computing device is  
13 higher than the connection priority included in the broadcasted  
14 request to become the gateway, performing the step of:  
15           broadcasting to the network a request to become the  
16 gateway from the respective computing device within the  
17 predetermined time period, wherein the request to become the  
18 gateway includes the connection priority of the respective  
19 computing device; and  
20           assigning the respective computing device as the new  
21 Internet gateway for the network if the respective computing  
22 device receives no response from the other computing devices  
23 within the predetermined time period.

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1           32. (Withdrawn) The method of claim 31, wherein each  
2 computing device is assigned a unique Internet protocol (IP) address,  
3 and further wherein the step of automatically reconfiguring each  
4 computing device to access the Internet through the new Internet  
5 gateway further comprises the steps of:

6           broadcasting to the network IP address of the computing device  
7 assigned as the new Internet gateway for the network; and

8           storing in the memory of each computing device the IP address  
9 broadcasted to the network as the IP address of the Internet gateway  
10 for the network.

1           33. (Withdrawn) The method of claim 31, wherein the  
2 computing device assigned as the gateway for the network is assigned  
3 a unique client IP address and assumes a predetermined gateway IP  
4 address.

1           34. (Withdrawn) The method of claim 31, wherein one of the  
2 computing devices is capable of operating as a proxy for the Internet  
3 gateway and is capable of being assigned a unique client IP address  
4 and a proxy IP address, and further wherein at least one of the other  
5 computing devices is capable of accessing the Internet by performing  
6 the steps of:

7           transmitting from the respective computing device proxy IP  
8 address of the proxy a message to be sent to the Internet; and

9           transmitting from the proxy IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

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1           35. (Withdrawn) A storage medium readable by a computing  
2 device and having instructions encoded thereon for causing the  
3 computing device to perform, in a network comprising a plurality of  
4 computing devices, each computing device having a memory and being  
5 capable of accessing the Internet, and one or more of the computing  
6 devices being capable of connecting to the Internet, and one of the  
7 computing devices being assigned as a current Internet gateway for  
8 the network, a method for assigning an Internet gateway for the  
9 network, the method comprising the steps of:  
10           detecting a failure to access the Internet through the current  
11 Internet gateway by one of the computing devices;  
12           dynamically assigning one of the computing devices capable of  
13 connecting to the Internet as a new Internet gateway for the network;  
14 and  
15           automatically reconfiguring each computing device to access the  
16 Internet through the new Internet gateway.

1           36. (Withdrawn) The storage medium of claim 35, wherein each  
2 computing device is assigned a unique Internet protocol (IP) address,  
3 and further wherein the step of automatically reconfiguring each  
4 computing device to access the Internet through the new Internet  
5 gateway further comprises the steps of:  
6           broadcasting to the IP address of the computing device assigned  
7 as the new Internet gateway for the network; and  
8           storing in the memory of each computing device the IP address  
9 broadcasted to the network as the IP address of the Internet gateway  
10 for the network.

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1           37. (Withdrawn) The storage medium of claim 35, wherein the  
2 computing device assigned as the gateway for the network is assigned  
3 a unique client IP address and assumes a predetermined gateway IP  
4 address.

1           38. (Withdrawn) The storage medium of claim 35, wherein one  
2 of the computing devices is capable of operating as a proxy having a  
3 unique sending IP address and a unique receiving IP address, and  
4 further wherein at least one of the other computing devices is capable  
5 of accessing the Internet by performing the steps of:  
6           transmitting from the respective computing device to the  
7 receiving IP address of the proxy a message to be sent to the Internet;  
8 and  
9           routing from the sending IP address of the proxy to the  
10 computing device assigned as the gateway for the network the message  
11 to be sent to the Internet.

1           39. (Withdrawn) The storage medium of claim 35, wherein the  
2 step of dynamically assigning one of the computing devices capable of  
3 connecting to the Internet as the new Internet gateway for the network  
4 further comprises the steps of:  
5           broadcasting to the network a request to become the gateway  
6 from one of the computing devices capable of connecting to the  
7 Internet, wherein the request to become the gateway includes the  
8 connection priority of the computing device broadcasting the request;  
9 and  
10           assigning the computing device broadcasting the request as the  
11 new Internet gateway for the network if the computing device  
12 broadcasting the request does not receive a response from the other  
13 computing devices within a predetermined time period.



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1           40. (Withdrawn) The storage medium of claim 39, wherein at  
2   least one of the other computing devices capable of connecting to the  
3   Internet responds to the broadcasted request to become the gateway by  
4   performing the steps of:  
5           determining whether the connection priority of the respective  
6   computing device is higher than the connection priority included in  
7   the broadcasted request to become the gateway;  
8           if the connection priority of the respective computing device is  
9   not higher than the connection priority included in the broadcasted  
10   request to become the gateway, sending no response to the  
11   broadcasted request; and  
12           if the connection priority of the respective computing device is  
13   higher than the connection priority included in the broadcasted  
14   request to become the gateway, performing the steps of:  
15           broadcasting to network a request to become the gateway  
16           from the respective computing device within the predetermined  
17           time period, wherein the request to become the gateway includes  
18           the connection priority of the respective computing device; and  
19           assigning the respective computing device as the new  
20   Internet gateway for the network if the respective computing  
21   device receives no response from the other computing devices  
22   within the predetermined time period.